

California Department of Fish and Game
722 Capitol Avenue
Sacramento, California

MARINE RESOURCES OPERATIONS
Cruise Report 58S7-Crab

Vessel: N. B. SCOFIELD

Dates: Departed San Pedro October 3, 1958.
Returned San Pedro October 29, 1958.

Localities: California coastal waters from Point Arguello to the vicinity of Point Arena.

- Purpose:
1. To conduct exploratory fishing activities in an effort to determine distribution and relative abundance of market crabs (Cancer magister) in areas not normally exploited by the commercial fleet.
 2. To tag legal crabs for migration, growth, and population studies.
 3. To conduct crab fishing operations on traditional grounds to determine the pre-season distribution, abundance, composition, and condition of market crabs on the grounds.
 4. To collect biological and environmental data pertinent to the distribution, abundance, and availability of the market crab.

- Results:
1. Exploratory fishing: Exploratory tows were made with otter trawl gear at 7 locations in the area from Piedras Blancas to Point Arguello. Crabs were taken in 3 tows. Catches ranged from 0 to 3 legal crabs per 30-minute tow. A legal crab is a male 7 inches in greatest width. Towing depths ranged from 24 to 67 fathoms. Exploratory trap sets at 8 stations from San Simeon to Pt. Arguello resulted in catches of 0.1 to 1.0 legal crabs per trap. Trap sets were made in depths ranging from 13 to 22 fathoms. Commercial concentrations of crabs were not located by exploratory fishing in these areas where commercial fishing does not normally occur.
 2. Crab tagging: A total of 1140 crabs was tagged and released as follows:

<u>Location</u>	<u>Number of Crabs</u>
Pt. Arguello to Piedras Blancas	519
Monterey Bay	140
Russian River to Bodega	392
Pt. Reyes to Pescadero Pt.	89
Total	1,140

3. Distribution, abundance, composition and condition of crabs on the traditional fishing grounds: Otter trawl tows of 30 minutes duration were made at 20 stations in commercially productive areas. Legal crabs were caught at 13 of these 20 trawl stations. Trawl catches are summarized as follows:

<u>Area</u>	<u>Number of Tows</u>	<u>Depth Range</u>	<u>Average Catch Legals Per Tow</u>	<u>Range of Catch Legals Per Tow</u>
Monterey Bay	4	9-36 fathoms	0	0
Fort Ross to Pt. Reyes	5	43-64 fathoms	11.8	0-25
Pt. Reyes- Farallons- Pt. San Pedro	11	22-45 fathoms	15.1	0-59

Crab trap catches in productive areas are summarized as follows:

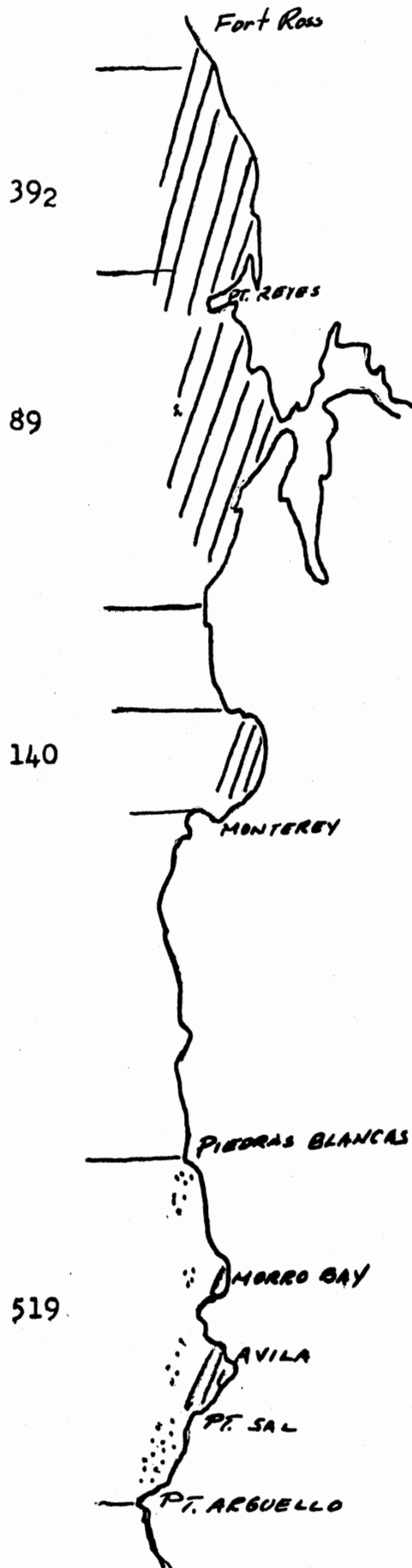
<u>Area</u>	<u>Number of Trap Stations</u>	<u>Average Catch Legals Per Trap</u>	<u>Range of Legals Per Trap by Stations</u>
Avila-Morro Bay	7	3.5	1.3 - 9.5
Monterey Bay	3	4.1	0.9 - 6.6
Russian River to Point Reyes	5	17.4	9.9 -30.8
Pt. Reyes to Pt. Bollinas	7	14.6	0.1 -28.2
North of Pt. San Pedro to Half Moon Bay	3	5.8	0.5 -14.2

Composition and condition data for crab catches are in the preliminary processing stages.

4. Oceanographic data: Bathythermograph casts to within five meters of the ocean bottom were made at 20 of the 27 trawl stations.

Personnel: R. B. Mitchell, Master Fisheries Vessel, California Department of Fish and Game
Tom Jow, Biologist-in-Charge, California Department of Fish and Game
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MRP-115-12-58



N.B.SCOFIELD

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Legend



Commercial productive crab fishing areas



Exploratory fishing areas

Numbers are numbers of tagged crabs released.